

*The Total Solar Eclipse of 1896 August 9.**(Note by the Secretaries.)*

A paper has been communicated to the Society by the Joint Permanent Eclipse Committee of the Royal Society and Royal Astronomical Societies on observations of the above eclipse, and will appear in the *Memoirs*. The observations were made by Mr. E. J. Stone, Radcliffe Observer, who was enabled to occupy a station in Novaya Zemlya by the private enterprise and liberality of Sir George Baden-Powell, who had conveyed the observers there in his own yacht and at his own expense.

Mr. Stone read his paper to the meeting on December 11, and exhibited the photographic spectra of prominences which he had obtained with a wide slit. He further showed photographs of the spectrum of the outer corona taken during totality and up to 60 seconds afterwards (the general character of the spectrum remaining the same), and some outline drawings of portions of the corona.

After Mr. Stone had read his paper, Mr. W. Shackleton, who had also accompanied the expedition on the invitation of Sir G. Baden-Powell, showed some photographs of the spectrum of the chromosphere and inner corona, taken with an objective prism. One of these, taken just before totality, showed a series of bright lines in the positions of the Fraunhofer lines, and was presumably the spectrum of the so-called "reversing layer."

Sir George Baden-Powell had himself assisted Mr. Shackleton with the coronagraph during totality, exposing the plates on the Sun. He showed the series of photographs of the corona, and gave an account of the circumstances which led him to organise the expedition, and continued:—

"Perhaps I may say a word or two as to how we secured those wonderful astronomical results which Mr. Stone and Mr. Shackleton have so well described.

"They told you much, but on one important matter they were silent. They did not tell of the very arduous work through which they went—how they toiled in the face of cold, fog, rain, sleet, and wind to get the instruments set up, protected, and adjusted. Without all that devoted work and exposure there could and would have been no results.

"For instance, the Siderostat falsely worked quite well almost up to the time of totality, and then we could see, to our horror, on the ground glass in the coronagraph the image of the Sun travelling steadily off the field. Mr. Shackleton energetically attacked the clockwork adjustments, but still the image was refractory, and only just before totality did he say, 'Now she'll do!'

"Perhaps the happiest moment to me during the eclipse was after totality, and immediately all was bright and light again,

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slipping in the ground glass and to my joy finding the image of the Sun still in the centre of the field.

"In going so far north I myself felt—perhaps because of the experiences of my respected uncle, Piazzzi Smyth, on the Peak of Teneriffe—that much might be gained by this first setting up of really powerful instruments in so high a latitude, the atmosphere being, without doubt, *different* from that in lower latitudes, and especially in the tropics.

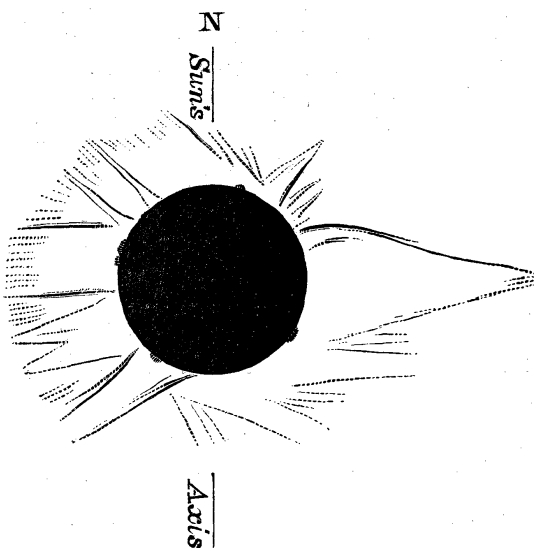
"I trust that our results, enhanced in value because the clerk of the weather saw fit to send clouds or rain to all the other stations scientifically occupied, will be of practical value in many ways, and especially, as it were, as stepping-stones between the photographic results first obtained in 1893 and those which will be secured in 1898."

Sir George Baden-Powell further expressed the opinion that, although he was glad to have been able to assist science by organising this expedition, it should not have been necessary to do so. Having had experience of the cost of such expeditions, he considered the amount placed at the disposal of the Committee was quite inadequate for the occupying of a proper number of stations; and he trusted it might be largely increased on future occasions. Should, however, the assistance of a yacht again be unavoidably necessary, he and Lady Baden-Powell would gladly again do all in their power, should they be free.

This generous offer was cordially acknowledged by the Fellows present.

Mr. W. H. Wesley, Assistant Secretary to the Society, who has had great experience in drawing different coronas, made the following remarks on the corona of 1896 :—

"The resemblance between the corona of 1896, as shown on



Outline of Corona of 1885.